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WATER SUPPLY OUTLOOK FOR MONTANA

MAR 25 '75



U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

MONTANA AGRICULTURAL EXPERIMENT STATION

AS OF
MAR. 1, 1975

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed inside the back cover of this report.

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

*Cover Photo: Cabins near Sacajawea Snow Course
in Bridger Mountains, Montana.*

SCS PHOTO 11-P480-15

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 111, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	204 E. 5th. Ave., Room 217, Anchorage, Alaska 99501
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



WATER SUPPLY OUTLOOK FOR MONTANA

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

KENNETH E. GRANT

ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.

|||||
Released by

VAN K. HADERLIE

STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
Bozeman, Montana

In Cooperation with

J. A. ASLESON

DIRECTOR
Montana Agricultural Experiment Station

|||||
Report prepared by

PHILLIP E. FARNES, Snow Survey Supervisor

and

BERNARD A. SHAFER, Assistant Snow Survey Supervisor

SOIL CONSERVATION SERVICE
P.O. Box 98
Bozeman, Montana 59715

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MONTANA WATER SUPPLY OUTLOOK
March 1, 1975

* * * * *

* February storms produced heavy snowfall in some areas
* of Montana while other areas received below average
* amounts. Southern mountains generally received good
* increases in snow water equivalent while areas along
* the continental divide north of the Blackfoot and
* Dearborn River headwaters did not fare as well. This
* areas snowpack is currently below average along with
* small areas in the extreme headwaters of the Madison
* and Yellowstone River Drainage. The majority of the
* state has near average snowpack in the mountains with
* above average snow in valley and foothill areas. The
* areas with above average snowpack are north slope of
* Absaroka, Beartooth, and Gallatin Ranges, a small
* area near Butte and along the Montana-Idaho border
* from Lolo Pass southward to Bannock Pass.

* Spring and summer streamflow is forecast to be near
* average over most of the state. A small area in
* extreme headwaters of Bitterroot and Big Hole Rivers
* will have above average runoff while Sun, Teton,
* Marias, and South Fork of Milk Rivers will be below
* average.

* Caution should be used in assuming the heavier snow-
* pack in the valley areas this season represents heavy
* mountain snowpack. Colder temperature during snowy
* periods and type of storm fronts associated with
* snowfall has resulted in less snow in the mountains
* percentage-wise as compared to lower elevations.
* With the heavier snowpacks on or near the valley floor,
* and frozen soil in many areas, there is a potential for
* large snowmelt runoff with the first few days of warm
* temperatures.

* * * * *

COLUMBIA RIVER DRAINAGE

Snow - Snowpack is near average over most of the drainage. Exceptions are the area along the continental divide in headwaters of Middle and South Forks of the Flathead which are below average. A small area near Butte and the Bitterroot River Headwaters have snow water storage that is above average.

Soils under the snowpack are drier than normal.

Streamflow - Spring and summer streamflow is forecast near average for most streams. Above average flows can be expected from Bitterroot River drainages above Darby. Runoff a little below average is forecast for Middle and South Forks of the Flathead River.

MISSOURI RIVER BASIN

Snow - Majority of the southwest Montana headwaters have near average snowpack. A small area near Butte, extreme Big Hole headwaters and north end of Gallatin Range are exceptions with above average snowpack. Below average snow storage exists along continental divide from head of Dearborn River to Canadian Border. The snow is also a little below average in extreme headwaters of Madison River drainage.

Soils under the snowpack are drier than normal in northern parts of the State increasing to near average moisture in southern areas.

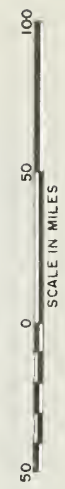
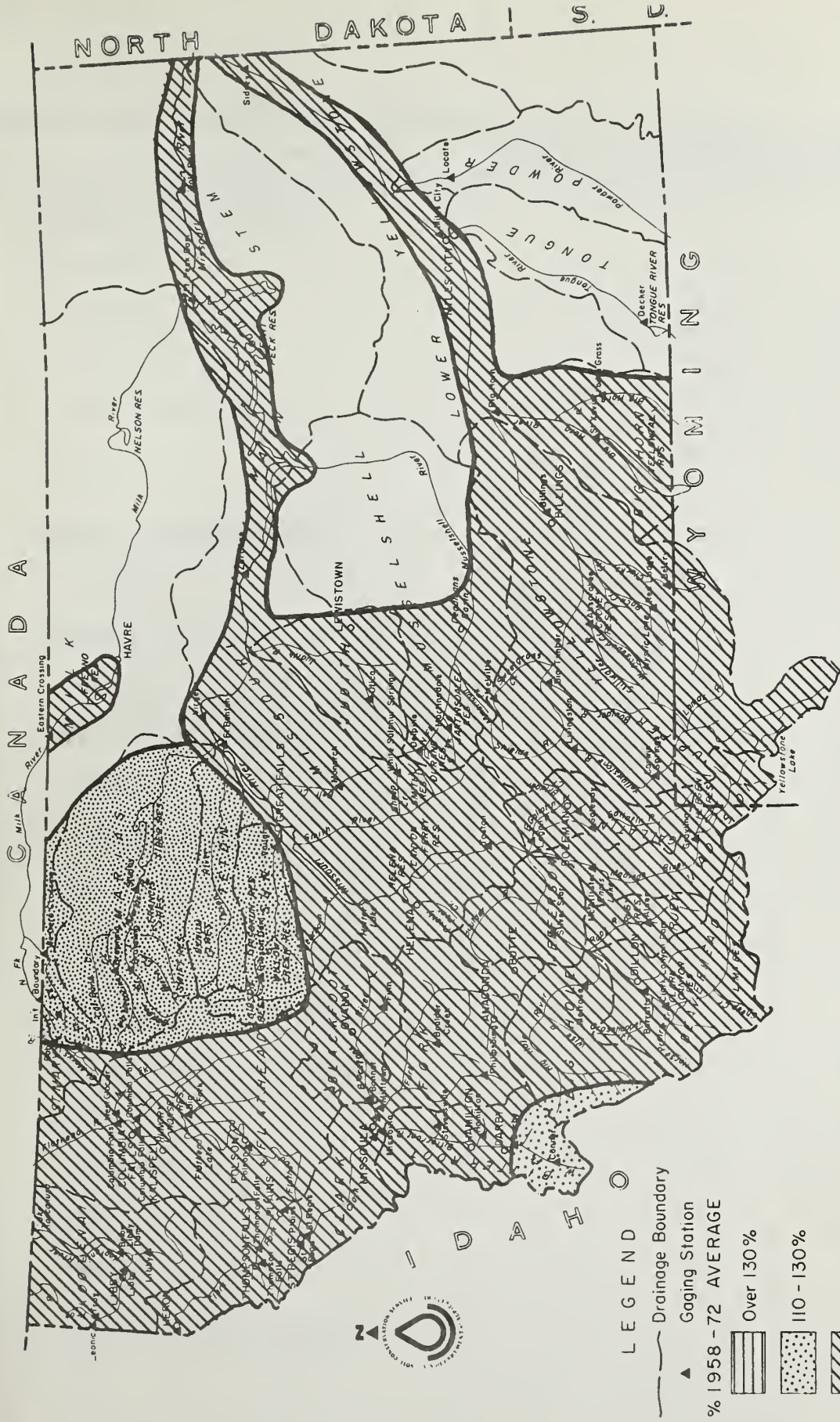
Streamflow - Spring and summer runoff should be near average except for above average runoff in headwaters of Big Hole River and below average in all drainages north of the Dearborn River. Natural flow of the Milk River will be deficient but diversions from the St. Mary's River should provide adequate water for near normal irrigation supply.

YELLOWSTONE

Snow - The extreme headwaters have a little below average snow cover, increasing to near average over most of the drainage. The north face of the Absaroka and Beartooth Mountains have above average snowpack.

Soils under the snow have about average moisture except for drier than usual conditions in extreme headwaters of Yellowstone and Clarks Forks Rivers.

Streamflow - Spring and summer runoff is forecast near average on all streams in the Yellowstone River drainage.

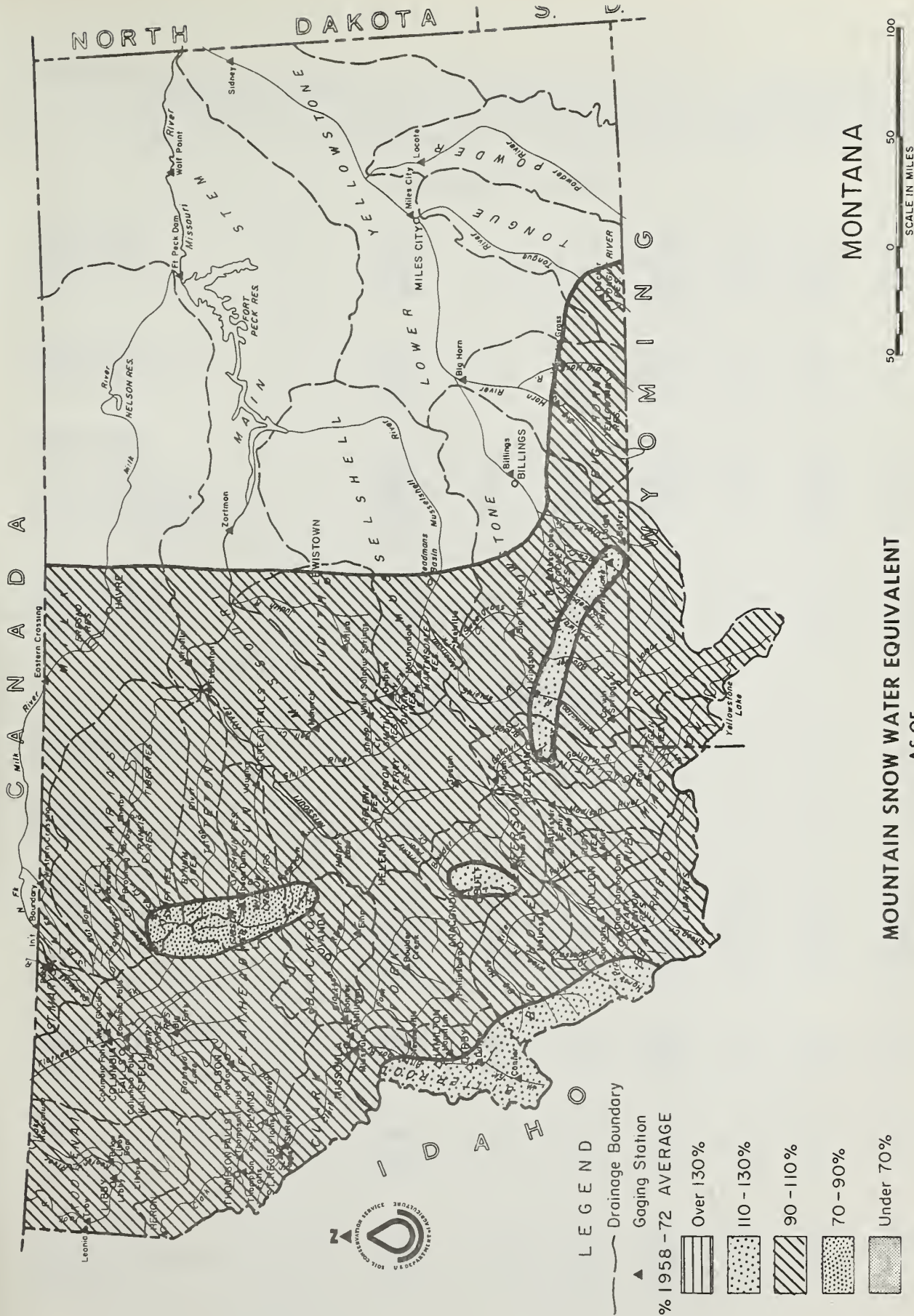


MONTANA

PROSPECTIVE STREAMFLOW FORECASTS
AS OF
MARCH 1, 1975

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF:	
		Last Year	Average
<u>COLUMBIA RIVER DRAINAGE</u>			
Kootenai	26	82	108
Flathead	21	79	103
Upper Clark Fork	27	96	106
Lower Clark Fork	11	82	108
Bitterroot	12	89	116
<u>MISSOURI RIVER DRAINAGE</u>			
Jefferson	48	95	107
Madison	24	83	99
Gallatin	14	98	101
Missouri Main Stem	12	93	101
Judith-Musselshell	11	94	95
Marias-Teton-Sun	7	78	88
Milk	3	88	99
Cypress Hills			
<u>YELLOWSTONE RIVER DRAINAGE</u>			
Yellowstone (above Bighorn)	29	101	100
Bighorn	25	111	99
Little Bighorn	7	149	111
Tongue	12	155	116
Powder	6	125	99
<u>SASKATCHEWAN RIVER DRAINAGE</u>			
Bow	5	72	93
-4-			



SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average †

COLUMBIA RIVER BASIN

Kootenai

Baree Trail	3800	48	7.5	2/27	6.4	6.5	6.3
Murphy Lake R. S.	3000	48	22.6	3/03	20.3	20.3	20.2
Raven	3050	48	23.0	2/28	16.1	18.2	19.0

Flathead

Desert Mountain	5600	54	8.4	2/28	5.4	8.8	7.3
Marias Pass	5250	54	6.5	2/27	4.0	5.8	5.4

Clark Fork

Black Pine	7100	48	10.0	2/27	7.2	8.1	7.5
Lubrecht Forest	4100	48	26.8	3/02	15.1	15.4	15.3
Seeley Lake R. S.	4030	48	11.9	3/04	8.6	9.8	8.0
Skalkaho Summit	7260	48	10.8	-	-	10.2	9.7

Bitterroot

Gibbons Pass	7100	48	7.1	2/27	3.4	5.8	4.9
Lolo Pass	5250	48	10.6	2/27	4.7	6.8	6.0

MISSOURI RIVER BASIN

Beaverhead

Lakeview	6700	48	15.3	2/28	8.2	16.9	9.9
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Madison

West Yellowstone	6700	48	6.5	2/27	1.8	2.8	2.6
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Gallatin

Bridger Bowl	7250	48	17.0	2/25	14.9	15.2	16.1
College Site No. 2	4856	54	17.7	2/28	15.4	16.4	14.0
Lick Creek	6860	48	18.8	2/26	13.3	14.3	16.1
Twenty-One Mile	7150	48	10.0	2/27	3.0	7.8	4.4

Missouri Main Stem

Kings Hill	7420	48	11.8	2/26	7.2	8.4	6.8
Stemple Pass	6350	48	5.9	2/27	3.5	5.1	4.1

Milk

Beaver Creek	3950	48	20.9	2/27	7.4	7.8	10.5
Rocky Boy	4700	36	10.1	2/27	7.3	8.7	7.0

Yellowstone

Battle Ridge	6020	48	17.6	2/25	13.2	13.8	13.4
Northeast Entrance	7350	48	9.4	3/01	3.8	5.8	6.0
PMC Dryland	3700	48	20.7	2/24	6.3	7.4	-

RESERVOIR STORAGE (Thousand Acre Feet) END OF MONTH

Basin or Stream	RESERVOIR	Usable Capacity	Usable Storage		
			This Year	Last Year	Average
COLUMBIA RIVER BASIN					
Kootenai	Koocanusa	5,694.0	1,312.0	1,561.0	-
Flathead	Hungry Horse	3,428.0	1,912.0	2,211.0	2,329.0
	Flathead Lake	1,791.0	816.1	1,221.0	1,009.0
	Camas (4)	45.2	19.0	15.8	24.5
	Mission Valley (8)	100.3	31.4	41.6	34.9
Clark Fork	Georgetown Lake	31.0	23.8	19.2	25.3
	Lower Willow Creek	4.6	1.6	2.9	1.2
	Nevada Creek	12.6	-	-	5.5
	Noxon Rapids	334.6	309.7	301.4	300.6
Bitterroot	Como	34.9	-	-	13.7
	Painted Rocks	31.7	0.0	0.0	21.3
MISSOURI RIVER BASIN					
Beaverhead	Clark Canyon	328.9	115.2	144.9	141.4
	Lima	84.0	44.9	49.1	31.9
Ruby	Ruby	38.8	25.7	29.0	27.4
Madison	Hebgen Lake	377.5	256.9	229.8	202.6
	Ennis Lake	41.0	35.7	33.9	37.6
Gallatin	Middle Creek	8.0	3.9	4.4	3.6
Missouri	Canyon Ferry	2,043.0	1,433.0	1,576.0	1,608.0
	Hauser & Helena	61.9	63.0	63.0	57.4
	Lake Helena	10.4	-	10.9	9.0
	Holter Lake	81.9	81.7	80.7	51.2
	Smith River	10.7	-	2.9	6.3
	Bair	7.0	-	2.5	4.7
	Martinsdale	23.1	-	7.5	7.5
	Deadman's Basin	72.2	-	37.1	46.6
	Fort Peck Lake	19,410.0	15,700.0	15,560.0	13,110.0
Sun	Gibson	105.0	60.5	36.1	42.2
	Willow Creek	32.3	24.3	20.8	19.5
	Pishkun	32.0	17.8	3.6	17.4
Marias	Lower Two Medicine	16.6	-	-	-
	Four Horns	19.2	-	-	-
	Swift	30.0	10.0	12.0	17.9
	Lake Frances	112.0	31.0	34.2	78.3
	Tiber	1,347.0	487.3	533.6	576.8
Milk	Beaver Creek	3.5	-	-	-
	Fresno	127.2	80.2	12.8	56.8
	Nelson	66.8	46.3	19.4	41.2
	Lake Sherburne	66.1	18.2	38.4	21.9
Yellowstone	Mystic Lake	20.8	5.9	10.4	7.9
	Tongue River	68.0	36.8	32.4	32.6
	Cooney	27.5	12.2	12.5	14.7
Bighorn	Bighorn	1,356.0	758.4	900.3	800.8

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST		THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average	PERIOD	Last Year Average

COLUMBIA RIVER BASIN

KOOTENAI RIVER					
Libby (near) (2)	7450	100	Apr-Sept	9506	7456
Below Libby Dam	6400	100	Apr-July	8320	6417
	5000	100	Apr-June	6384	5011
FISHER RIVER					
Libby (near)	305	107	Apr-Sept		286
	290	108	Apr-July		269
YAAK RIVER					
Troy (near)	570	100	Apr-Sept		568
	550	101	Apr-July		544
KOOTENAI RIVER					
Leonia (at) (2)	9050	100	Apr-Sept		9073
	7950	100	Apr-July		7957
	6400	100	Apr-June		6431
FLINT CREEK					
Boulder Creek (below) (3)	68.5	96	Apr-Sept		71.6
	55.0	98	Apr-July		56.1
MIDDLE FORK ROCK CREEK					
Philipsburg (near)	79.5	105	Apr-Sept		75.9
	72.5	106	Apr-July		68.6
NEVADA CREEK					
Finn (near)	21.5	100	Apr-Sept		21.6
	20.0	100	Apr-July		20.1
BLACKFOOT RIVER					
Bonner (near)	1070	104	Apr-Sept		1031
	970	104	Apr-July		934
	840	103	Apr-June		814
CLARK FORK RIVER					
Milltown (above) (4)	780	98	Apr-Sept		792
	690	100	Apr-July		690
	590	100	Apr-June		590
CLARK FORK RIVER					
Missoula (above)	1850	101	Apr-Sept	2016	1823
	1660	102	Apr-July	1831	1624
	1430	102	Apr-June	1595	1404

(2) Adjusted for storage in Lake Koocanusa.

(3) Sum Flint Creek at Maxville and Boulder Creek at Maxville.

(4) Difference in observed flow Clark Fork above Missoula and Blackfoot near Bonner.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
WEST FORK BITTERROOT RIVER					
Conner (near) (5)	200	116	Apr-Sept		172
	185	118	Apr-July		156
BITTERROOT RIVER					
Darby (near)	665	114	Apr-Sept	732	584
	620	114	Apr-July	670	542
	545	114	Apr-June	589	479
SKALKAHO CREEK					
Hamilton (near)	58.0	102	Apr-Sept		56.6
	51.0	103	Apr-July		49.6
BURNT FORK CREEK					
Stevensville (near) (10)	38.5	109	Apr-Sept		35.3
	33.8	109	Apr-July		31.0
BITTERROOT RIVER					
Missoula (at) (6)	1560	102	Apr-Sept	732	1527
	1460	103	Apr-July	670	1412
	1270	103	Apr-June	589	1236
CLARK FORK RIVER					
Missoula (below)	3410	102	Apr-Sept		3350
	3120	103	Apr-July		3036
	2700	102	Apr-June		2640
ST. REGIS RIVER					
St. Regis (near)	345	106	Apr-Sept		325
	325	106	Apr-July		308
CLARK FORK RIVER					
St. Regis (at)	4500	100	Apr-Sept	5824	4507
	4100	100	Apr-July	5358	4087
	3550	100	Apr-June	4633	3563
NORTH FORK FLATHEAD RIVER					
Columbia Falls (near)	1950	98	Apr-Sept		1991
	1780	98	Apr-July		1831
	1520	98	Apr-June		1551
MIDDLE FORK FLATHEAD RIVER					
West Glacier (near)	1730	90	Apr-Sept	2601	1917
	1600	90	Apr-July	2413	1768
	1380	91	Apr-June	1973	1514
SOUTH FORK FLATHEAD RIVER					
Columbia Falls (near) (7)	2130	90	Apr-Sept	3092	2378
	2000	89	Apr-July	2946	2240
	1760	89	Apr-June	2496	1984

(5) Adjusted for storage in Painted Rocks Reservoir.

(6) Difference in observed flow Clark Fork above and below Missoula.

(7) Adjusted for storage in Hungry Horse Reservoir.

(10) Adjusted for diversion into Sunset Highline Canal.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
FLATHEAD RIVER					
Columbia Falls (at) (7)	5900	92	Apr-Sept	8649	6421
	5500	93	Apr-July	8056	5942
	4800	93	Apr-June	6667	5151
SWAN RIVER					
Big Fork (near)	675	94	Apr-Sept		717
	600	95	Apr-July		630
FLATHEAD RIVER					
Polson (near) (8)	7150	93	Apr-Sept	10341	7648
	6690	94	Apr-July	9718	7082
	5750	94	Apr-June	8062	6113
CLARK FORK RIVER					
Plains (near) (8)	12100	96	Apr-Sept	16349	12601
	11100	96	Apr-July	15128	11523
	9500	96	Apr-June	12596	9934
THOMPSON RIVER					
Thompson Falls (near)	275	99	Apr-Sept		277
	245	99	Apr-July		248
PROSPECT CREEK					
Thompson Falls (at)	150	102	Apr-Sept		147
	140	102	Apr-July		137
CLARK FORK RIVER					
Whitehorse Rapids (at) (9)	13700	97	Apr-Sept		14336
	12470	97	Apr-July		13086
	10800	97	Apr-June		11325

(7) Adjusted for storage in Hungry Horse Reservoir.

(8) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.

(9) Adjusted for storage in Hungry Horse, Flathead Lake, and Noxon Rapids Reservoirs.

1. The first part of the document is a list of the names of the persons who were present at the meeting.

1	John Doe	1
2	Jane Smith	2
3	Bob Johnson	3
4	Alice Brown	4
5	Charlie White	5
6	Diana Green	6
7	Frank Black	7
8	Grace Lee	8
9	Henry King	9
10	Ivy Hill	10
11	Jack Adams	11
12	Karen Baker	12
13	Liam Clark	13
14	Mia Evans	14
15	Noah Foster	15
16	Olivia Garcia	16
17	Peter Hall	17
18	Quinn Harris	18
19	Rachel Ives	19
20	Samuel Jones	20
21	Tina Kelly	21
22	Uma Khan	22
23	Victor Lopez	23
24	Wendy Miller	24
25	Xavier Moore	25
26	Yara Nelson	26
27	Zoe Parker	27
28	Adam Reed	28
29	Bella Scott	29
30	Caleb Taylor	30
31	Dora Thomas	31
32	Ethan Turner	32
33	Fiona Vance	33
34	Gavin Ward	34
35	Hannah Young	35
36	Isaac Zane	36
37	Julia Bell	37
38	Kyle Black	38
39	Laura Blue	39
40	Mark Brown	40
41	Nancy Green	41
42	Oscar Hall	42
43	Pamela King	43
44	Quinn Lee	44
45	Rachel Miller	45
46	Samuel Moore	46
47	Tina Nelson	47
48	Uma Parker	48
49	Victor Reed	49
50	Wendy Scott	50
51	Xavier Taylor	51
52	Yara Thomas	52
53	Zoe Turner	53
54	Adam Vance	54
55	Bella Ward	55
56	Caleb Young	56
57	Dora Zane	57
58	Ethan Bell	58
59	Fiona Black	59
60	Gavin Blue	60
61	Hannah Brown	61
62	Isaac Green	62
63	Julia Hall	63
64	Kyle King	64
65	Laura Lee	65
66	Mark Miller	66
67	Nancy Moore	67
68	Oscar Nelson	68
69	Pamela Parker	69
70	Quinn Reed	70
71	Rachel Scott	71
72	Samuel Taylor	72
73	Tina Thomas	73
74	Uma Turner	74
75	Victor Vance	75
76	Wendy Ward	76
77	Xavier Young	77
78	Yara Zane	78
79	Zoe Bell	79
80	Adam Black	80
81	Bella Blue	81
82	Caleb Brown	82
83	Dora Green	83
84	Ethan Hall	84
85	Fiona King	85
86	Gavin Lee	86
87	Hannah Miller	87
88	Isaac Moore	88
89	Julia Nelson	89
90	Kyle Parker	90
91	Laura Reed	91
92	Mark Scott	92
93	Nancy Taylor	93
94	Oscar Thomas	94
95	Pamela Turner	95
96	Quinn Vance	96
97	Rachel Ward	97
98	Samuel Young	98
99	Tina Zane	99
100	Uma Bell	100

THE END

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST		THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average	PERIOD	Last Year Average

MISSOURI RIVER BASIN

BEAVERHEAD RIVER					
Grant (near) (11) (12)	144	100	Apr-Sept	151	145
	130	102	Apr-July	116	127
RUBY RIVER					
Alder (near)	90.0	96	Apr-Sept		93.9
	77.0	97	Apr-July		79.4
BIG HOLE RIVER					
Melrose (near)	810	108	Apr-Sept		748
	750	108	Apr-July		694
BIRCH CREEK					
Glen (near)	14.3	104	Apr-Sept		13.7
	12.1	105	Apr-July		11.5
JEFFERSON RIVER					
Silver Star (at) (12)	1000	103	Apr-Sept		970
	880	102	Apr-July		865
WILLOW CREEK					
Harrison (near)	21.0	111	Apr-Sept		18.9
	19.0	111	Apr-July		17.1
MADISON RIVER					
Grayling (near) (13)	482	100	Apr-Sept	605	480
	380	102	Apr-July	486	374
MADISON RIVER					
McAllister (near) (14)	860	104	Apr-Sept	1025	828
	690	106	Apr-July	840	652
GALLATIN RIVER					
Gateway (near)	570	107	Apr-Sept		531
	490	109	Apr-July		451

- (11) Adjusted for storage in Lima Reservoir.
 (12) Adjusted for storage in Clark Canyon Reservoir.
 (13) Adjusted for storage in Hebgen Lake.
 (14) Adjusted for storage in Hebgen and Ennis Lakes.



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
HYALITE CREEK					
Bozeman (near) (15)	46.0	104	Apr-Sept		44.2
	40.0	105	Apr-July		38.2
GALLATIN RIVER					
Logan (at)	630	110	Apr-Sept		573
	540	111	Apr-July		487
MISSOURI RIVER					
Toston (at) (16)	2600	107	Apr-Sept	2742	2432
	2250	107	Apr-July	2410	2109
SHEEP CREEK					
White Sulphur Springs (near)	21.3	103	Apr-Sept	29.7	20.6
	18.5	103	Apr-July	26.3	18.0
SUN RIVER					
Gibson Dam (at) (17)	475	80	Apr-Sept	624	590
	435	80	Apr-July	569	541
BELT CREEK					
Monarch (near)	130	106	Apr-Sept		123
	120	106	Apr-July		113
MISSOURI RIVER					
Fort Benton (at) (18)	3730	101	Apr-Sept		3690
	3175	102	Apr-July		3123
TWO MEDICINE CREEK					
Browning (near) (19)	220	87	Apr-Sept		253
	210	88	Apr-July		240
BADGER CREEK					
Browning (near)	111	85	Apr-Sept		130
	96.0	85	Apr-July		113
MARIAS RIVER					
Shelby (near) (20)	480	86	Apr-Sept	554	559
	455	85	Apr-July	518	538

- (15) Adjusted for storage in Middle Creek Reservoir.
- (16) Adjusted for storage in Hebgen and Ennis Lakes and Clark Canyon Reservoir.
- (17) Adjusted for storage in Gibson Reservoir and diversions.
- (18) Adjusted for storage in Canyon Ferry Reservoir.
- (19) Adjusted for storage in Two Medicine Reservoir and diversions into Two Medicine Canal.
- (20) Adjusted for storage in Two Medicine, Four Horns, Lake Frances, and Swift Reservoirs.



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
MISSOURI RIVER					
Virgelle (at) (21)	4250	98	Apr-Sept	4342	
	3700	99	Apr-July	3742	
SOUTH FORK JUDITH RIVER					
Utica (near)	14.5	97	Apr-Sept	14.9	
	13.5	98	Apr-July	13.7	
MISSOURI RIVER					
Landusky (near) (21)	4700	99	Apr-Sept	4739	
	4050	100	Apr-July	4068	
NORTH FORK MUSSELSHELL RIVER					
Delpine (near)	6.1	98	Apr-Sept	6.2	
	5.2	96	Apr-July	5.4	
SOUTH FORK MUSSELSHELL RIVER					
Martinsdale (above)	51.0	102	Apr-Sept	50.1	
	48.0	101	Apr-July	47.3	
MISSOURI RIVER					
Fort Peck Dam (below) (22)	4550	99	Apr-Sept	4598	
	4050	100	Apr-July	4069	
MILK RIVER					
Eastern Crossing (at)	265	93	Mar-Sept	286	
MISSOURI RIVER					
Wolf Point (near) (22)	4900	100	Apr-Sept	4898	
	4350	100	Apr-July	4361	
MISSOURI RIVER					
Williston, N. D. (near) (29)	11900	101	Apr-Sept	11778	
	10650	102	Apr-July	10437	

SASKATCHEWAN RIVER BASIN

ST. MARY RIVER					
Babb (near) (30)	490	100	Apr-Sept	489	
	422	100	Apr-July	421	

- (21) Adjusted for storage in Canyon Ferry and Tiber Reservoirs.
- (22) Adjusted for storage in Canyon Ferry, Tiber, and Fort Peck Reservoirs.
- (29) Adjusted for storage in Canyon Ferry, Tiber, Fort Peck, Buffalo Bill, Boysen, and Yellowtail Reservoirs. Sum Yellowstone River near Sidney and Missouri River near Culbertson.
- (30) Adjusted for storage in Lake Sherburne.



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST		THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average	FORECAST PERIOD	Last Year Average

YELLOWSTONE RIVER BASIN

YELLOWSTONE RIVER					
Corwin Springs (at)	2060	103	Apr-Sept	2720	1996
	1730	104	Apr-July	2335	1662
YELLOWSTONE RIVER					
Livingston (near)	2400	104	Apr-Sept		2317
	2030	105	Apr-July		1926
BOULDER RIVER					
Big Timber (at)	405	107	Apr-Sept		379
	380	108	Apr-July		350
STILLWATER RIVER					
Absarokee (near) (25)	620	105	Apr-Sept		591
	530	107	Apr-July		494
CLARKS FORK RIVER					
Belfry (near)	630	104	Apr-Sept		607
	570	104	Apr-July		546
ROCK CREEK					
Red Lodge (near)	114	104	Apr-Sept	138	110
	89.0	106	Apr-July	117	84.0
YELLOWSTONE RIVER					
Billings (at)	4600	108	Apr-Sept	5449	4246
	3950	109	Apr-July	4659	3613
BIGHORN RIVER					
St. Xavier (near) (26)	1800	97	Apr-Sept		1849
	1670	98	Apr-July		1706
LITTLE BIGHORN RIVER					
Lodgegrass (near) (28)	137	94	Apr-Sept		146
	122	95	Apr-July		129
YELLOWSTONE RIVER					
Miles City (at) (27)	6500	102	Apr-Sept		6378
	5800	104	Apr-July		5555
YELLOWSTONE RIVER					
Sidney (near) (27)	6800	102	Apr-Sept		6665
	6150	104	Apr-July		5895

(25) Adjusted for storage in Mystic Lake.

(26) Adjusted for storage in Buffalo Bill, Boysen, Bull Lake, and Yellowtail Reservoirs.

(27) Adjusted for storage in Buffalo Bill, Boysen, and Yellowtail Reservoirs.

(28) Sum Little Bighorn below Pass Creek and Lodgegrass Creek near Wyola.



SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average
ABUNDANCE LAKE	8800	2/23	56	16.6	22.6	17.7
ARCH FALLS	7350	2/26	43	13.0	9.4	10.9
BALD EAGLE PEAK	5700	2/27	157	64.5	81.2	60.1
BALD RIDGE	7500	2/28	45	13.2	8.6	11.3
BANFIELD MOUNTAIN	5600	2/28	73	25.6	31.0	23.2
BANFIELD MOUNTAIN PILLOW	5600	2/28	SP	21.5	28.6	19.4
BARRE CREEK	5500	2/27	125	50.3	65.6	43.6
BARRE MIDWAY	4600	2/27	105	38.5	47.5	34.6
BARRE TRAIL	3800	2/27	39	13.3	13.1	10.5
BASSNOO PEAK	5150	2/27	41	12.5	12.4	10.5
BATTLE RIDGE	6020	2/25	30	9.2	6.1	7.0
BEAR BASIN	8150	2/27	57	19.6	22.3	19.4
BEAR PAW SKI AREA	5200	2/27	26	6.3	6.8	6.3
BERRY MEADOW	7000	2/24	30	7.9	7.7	7.5
BIG COULEE	5100	2/28	22	5.3	7.2	-
BIG CREEK	6750	2/26	94	36.5	51.7	41.7
BIG SKY M.V.	7450	2/26	43	12.4	16.4	-
BIG SPRINGS (ID)	6500	2/27	61	18.0	22.3	18.6
BLACK BEAR PILLOW	7950	2/26	SP	28.9	41.8	-
BLACK CANYON (ID)	7850	2/25	88	27.8	39.8	29.4
BLACK MOOSE (ID)	8120	2/25	96	33.8	46.0	36.2
BLACK PINE	7100	2/27	41	12.4	15.8	11.9
BLACK PINE PILLOW	7100	2/27	SP	13.0	13.8	11.7
BLOODY DICK	7600	2/27	46	14.2	13.0	12.1
BOTS SOTS	8000	2/28	36	10.0	4.6	-
BOULDER MOUNTAIN	7950	2/24	56	17.9	23.0	16.3
BOW RIVER #1 (AL)	5100	2/26	33	6.7	10.0	8.1
BOXELDER CREEK	5100	2/27	32	7.3	6.6	-
BRANHAM LAKES	8850	3/01	78	26.2	35.3	25.9
BRIDGER BOWL	7250	2/25	61	21.1	23.4	26.1
BRIDGER BOWL PILLOW	7250	2/25	SP	18.0	23.2	24.3
BRISTOW CREEK	3900	2/28	47	15.2	14.8	13.7
BRUSH CREEK TIMBER	5000	2/26	38	10.8	11.0	10.2
BULL MOUNTAIN	6600	3/03	24	6.6	6.0	-
CABIN CREEK	5200	2/28	24	6.1	6.0	7.2
CALL ROAD	8050	2/24	39	10.4	12.6	9.8
CALVERT CREEK	6450	2/28	42	12.0	13.2	9.1
CAMP CREEK (ID)	6800	2/27	38	10.9	8.0	9.0
CAMP MISERY	6400	2/27	110	40.8	67.2	42.2
CAMP SENIA	7890	2/28	28	7.4	2.6	5.2
CANYON (WY)	7750	3/01	42	12.2	14.0	13.9
CARROT BASIN	9000	2/26	88	28.9	43.5	32.3
CARROT BASIN PILLOW	9000	2/26	SP	20.1	29.3	23.9
CEDAR GROVE	4100	2/27	43	13.7	14.8	11.6
CHATEAU LAWN #8 (AL)	5700	2/26	39	9.4	13.0	9.2
CHESSMAN RESERVOIR	6200	2/26	19	4.5	3.7	3.1
CLOVER MEADOW	8600	2/24	53	16.0	16.4	14.7
COLE CREEK	7850	2/27	54	16.8	10.2	-



SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average
COLE CREEK PILLOW	7850	2/27	SP	15.0	-	-
COLLEY CREEK	6300	2/28	36	10.0	6.1	-
COMBINATION	5600	2/27	24	5.7	7.2	6.7
COMBINATION PILLOW	5600	2/27	SP	6.5	6.6	-
COOKE STATION	8150	3/01	60	17.8	16.8	17.6
COPPER BOTTOM	5200	2/28	34	8.8	14.6	-
COPPER CAMP	6950	2/28	70	24.3	34.3	-
COPPER CREEK	5700	2/28	44	13.3	16.3	15.4
COPPER LAKE CREEK	6100	2/28	62	21.0	25.9	-
COPPER MOUNTAIN	7700	3/02	41	12.0	10.5	10.0
COTTONWOOD CREEK	6400	2/28	27	8.2	-	-
COYOTE HILL	4200	2/26	42	12.4	12.2	10.4
CREVICE MOUNTAIN	8400	2/28	39	9.8	8.8	9.2
DAD CREEK LAKE	8400	2/23	42	11.7	12.0	11.9
DAISY PEAK	7600	2/27	36	9.5	10.5	10.3
DALY CREEK	5780	2/24	42	11.4	-	-
DARKHORSE LAKE	8600	2/23	77	28.6	27.8	24.2
DAVIS CREEK	5400	2/25	77	26.9	33.4	23.8
DEADMAN CREEK	6450	2/26	35	10.2	11.2	11.4
DEADMAN CREEK PILLOW	6450	2/26	SP	9.4	10.8	9.8
DESERT MOUNTAIN	5600	2/28	47	15.0	19.4	14.7
DEVILS SLIDE	8100	2/26	66	21.9	18.7	20.2
DISCOVERY BASIN	7050	2/28	40	10.9	-	-
DIVIDE	7800	2/24	35	8.5	10.6	10.0
EAST FORK R.S.	5400	2/23	33	8.0	8.4	6.7
EL DORADO MINE	7800	2/26	57	17.2	18.7	18.7
EIK HORN SPRINGS	7800	3/03	34	8.7	9.2	8.4
EIK PEAK	8000	2/27	48	15.0	14.0	15.8
FATTY CREEK	5500	2/26	67	21.3	27.5	21.0
FISHER CREEK	9100	3/01	97	32.3	39.7	32.6
FISHER CREEK PILLOW	9100	3/01	SP	30.5	37.4	30.5
FLEECE RIDGE	7500	3/03	37	10.2	11.6	-
FOOLHEN	8280	2/23	47	13.2	17.6	15.6
FOUR MILE	6900	2/25	31	7.8	10.2	7.6
FRED BURR PASS	8000	2/26	68	21.9	21.1	23.5
FROHNER MEADOWS	6480	2/25	32	8.4	8.6	-
FROHNER MEADOWS PILLOW	6480	2/25	SP	7.9	8.8	-
GARVER CREEK	4250	2/25	44	13.1	14.4	12.3
GARVER CREEK PILLOW	4250	2/25	SP	10.7	14.0	10.7
GIBBONS PASS	7100	2/25	74	24.9	28.4	20.5
GREAT MOUNTAIN	7000	3/02	34	8.9	12.1	10.3
GOLD CREEK LAKE	7200	2/26	42	12.4	15.2	13.8
GOLD STONE	8100	2/27	54	17.3	16.2	15.3
GRASSHOPPER	7000	2/27	20	5.3	4.4	5.1
GRAVES CREEK	4300	2/24	54	16.9	23.4	17.9
GRIFFIN CREEK DIVIDE	5150	2/26	48	15.0	14.6	11.6
GRIZZLY PEAK	8400	2/27	49	15.1	9.3	13.5
HAWKINS LAKE	6450	2/25	86	32.1	41.9	28.3
HAWKINS LAKE PILLOW	6450	2/25	SP	28.0	42.2	26.4
HERGEN DAM	6550	3/01	47	13.6	11.4	10.8



SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
					Last Year	Average
NAME	Elevation					
HELL ROARING DIVIDE	5770	2/25	90	32.3	41.8	29.1
HIGHWOOD DIVIDE	5650	2/28	28	7.3	9.9	-
HIGHWOOD STATION	4600	2/28	16	4.3	3.9	-
HOOD MEADOW	6600	2/26	37	11.4	8.6	9.8
INDEPENDENCE	7850	2/28	57	18.3	18.0	17.5
INTERGAARD	6450	3/01	30	8.4	9.0	7.7
ISLAND PARK (ID)	6310	2/27	57	15.6	17.7	14.7
JACK CREEK	7500	2/26	20	4.7	5.5	4.8
JAHNKE LAKE TRAIL	7200	2/27	40	11.2	10.5	8.6
JOHNSON PARK	6450	2/27	24	6.6	6.0	7.4
KILGORE (ID)	6200	2/27	40	12.1	9.9	10.1
KINGS HILL	7500	2/26	43	12.7	14.5	12.5
KISHENFHN	3890	2/28	39	10.2	9.8	9.3
KIWANIS CAMP	3720	2/27	15	3.2	.0	-
LAKE CAMP (WY)	7850	2/28	32	7.3	8.1	8.2
LAKE CREEK	6100	2/24	32	8.5	6.8	6.2
LAKEVIEW CANYON	6930	2/28	36	10.6	8.6	11.1
LAKEVIEW RIDGE	7400	2/28	33	10.0	7.2	9.9
LATHAM SPRINGS (ID)	7650	2/25	85	27.8	37.6	27.9
LEMMI PASS	7480	2/23	35	9.8	7.5	7.9
LEMMI RIDGE	8100	2/23	41	11.3	10.1	8.9
LICK CREEK	6860	2/26	37	10.1	7.0	8.8
LICK CREEK PILLOW	6860	2/26	SP	9.0	5.4	8.3
LITTLE PARK	7400	2/27	48	16.0	16.9	14.4
LOGAN CREEK	4300	2/26	34	9.2	7.6	8.1
LOLO PASS (ID)	5230	2/27	85	28.7	36.3	28.5
LONE MOUNTAIN	8880	2/26	62	20.7	-	-
LOOKOUT (ID)	5250	2/28	111	30.4	43.4	32.7
LOST HORSE	5940	2/28	97	33.6	37.6	29.0
LOST SOUL	4800	2/28	56	17.7	21.9	16.6
LOWER TWIN	7900	2/25	62	20.0	24.4	18.6
LIBRECHT FLUME	4800	2/28	29	8.3	8.0	6.5
LIBRECHT FLUME PILLOW	4800	2/28	SP	5.5	7.7	6.2
LIBRECHT FOREST # 3	5450	2/28	35	9.3	8.0	7.0
LIBRECHT FOREST # 4	4650	2/28	22	5.7	4.6	3.7
LIBRECHT FOREST # 6	4040	2/28	23	6.5	5.6	4.3
LIBRECHT HYDROPLOT	4200	2/28	27	7.6	8.0	5.4
LIPINE CREEK (WY)	7300	3/02	29	8.4	9.7	9.8
MADISON PLATEAU	7750	2/26	58	17.7	24.0	18.6
MADISON PLATEAU PILLOW	7750	2/26	SP	18.8	25.2	20.0
MARIAS PASS	5250	2/27	55	16.8	20.2	16.9
MAYNARD CREEK	6210	2/25	53	16.1	16.2	16.9
MAYNARD CREEK PILLOW	6210	2/25	SP	9.8	8.7	10.1
MIDDLE MILL CREEK	7850	3/01	53	15.8	18.5	13.7
MILL CREEK	7500	2/28	49	12.6	8.7	11.7
MINERAL CREEK	4000	3/02	59	19.0	24.4	18.4
MIRROR LAKE #6 (AL)	6600	2/24	33	8.3	12.5	10.3
MONUMENT PEAK	8800	2/28	74	24.2	26.1	24.4
MOOSE CREEK (ID)	6200	2/27	61	17.2	19.8	15.2
MOUNT LOCKHART	6400	3/03	57	18.6	26.0	21.0



SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
					Last Year	Average
NAME	Elevation					
MT. EISENHOWER #10 (AL)	5000	2/25	26	5.6	7.7	5.3
MIDD LAKE	7650	2/28	62	19.6	21.8	19.2
NEW WORLD	6900	2/25	47	15.2	11.4	13.1
NEZ PERCE CAMP	5580	2/23	53	17.9	17.6	13.0
NEZ PERCE CREEK	6500	3/02	28	7.8	7.5	6.3
NEZ PERCE PASS	6570	2/23	60	21.1	19.3	14.3
NOISY BASIN	6040	2/27	108	39.8	-	-
NOISY BASIN PILLOW	6040	2/27	SP	32.0	-	-
NOISY CREEK	3600	2/27	21	6.1	4.8	-
NORRIS BASIN (WY)	7500	2/28	38	10.4	9.5	9.9
NORTH FORK JOCKO	6330	2/27	122	45.2	46.3	42.5
NORTH MEADOW	7500	2/25	31	8.0	10.0	7.0
NORTHEAST ENTRANCE	7400	3/01	34	10.8	7.4	8.4
NORTHEAST ENTRANCE PILL.	7400	3/01	SP	8.6	7.3	8.3
NOTCH	8500	2/24	49	15.0	16.9	13.3
PETERSON MEADOWS	7200	2/27	35	10.4	8.2	-
PICNIC GROUNDS	6200	3/02	19	5.0	5.8	4.1
PIPESTONE PASS	7200	3/02	22	6.0	4.3	4.5
PIPESTONE UPPER #2 (AL)	5300	2/25	33	8.4	10.5	8.5
PORMAN CREEK	5100	2/27	97	35.7	40.8	33.7
PORMAN CREEK PILLOW	5100	2/27	SP	33.2	42.3	28.7
PORCUPINE R.S.	6500	2/28	28	7.4	4.6	6.5
POTOMAGETON PARK	7150	2/25	48	14.4	15.1	11.8
RED MOUNTAIN	6000	2/26	63	19.8	26.5	17.4
ROCKER PEAK	8000	2/24	44	13.0	13.4	13.7
ROCKER PEAK PILLOW	8000	2/24	SP	12.2	14.0	13.2
ROCKY ROY	4700	2/27	22	4.4	4.3	4.6
ROCKY ROY PILLOW	4700	2/27	SP	3.5	3.0	5.0
SACAJAWEA	6550	2/25	42	13.6	11.6	13.3
SADDLE MOUNTAIN	7940	2/27	77	25.3	27.4	22.7
SADDLE MOUNTAIN PILLOW	7940	2/27	SP	25.5	30.4	24.0
SAWTELI MOUNTAIN (ID)	8710	2/27	78	25.4	33.3	30.4
SENTINEL CREEK	8300	2/25	67	20.8	21.6	21.3
SHOWER FALLS	8100	2/26	67	22.9	20.5	21.6
SHOWER FALLS PILLOW	8100	2/26	SP	21.9	20.4	20.8
SILVER RUN	6630	2/28	26	7.1	-	-
SKALKAHO SUMMIT	7260	2/23	72	24.3	26.0	23.4
SI AG-A-MELT LAKE	8750	2/23	68	24.2	29.0	24.8
SILVER ROCK MOUNTAIN	7100	2/25	51	15.4	17.4	14.6
SMUGGLER MINE	6960	3/01	37	10.5	11.2	9.1
SOUTH FORK SHIELDS	8100	2/28	64	21.6	20.6	21.4
SPUR PARK	8000	2/26	55	17.8	20.8	19.6
SPUR PARK PILLOW	8100	2/26	SP	18.2	22.0	20.0
STAHL PEAK	6050	2/24	98	33.6	51.0	37.6
STEMPLE PASS	6600	2/27	37	10.7	9.2	9.8
STORM LAKE	7780	2/27	37	9.7	12.2	11.7
STUART MLI	6500	3/01	26	7.0	7.1	6.3
STUART MOUNTAIN	7400	3/03	87	31.9	38.2	28.9
SUCKER CREEK	3960	2/27	0	.0	.0	-
SYLVAN PASS (WY)	7100	2/28	45	12.0	14.0	11.9



SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
					Last Year	Average
NAME	Elevation					
TARGHEE PASS (ID)	7000	2/27	43	10.9	12.3	13.5
TAYLOR ROAD	4080	2/27	18	3.7	.8	-
TEN MILE LOWER	6600	2/26	30	7.7	8.0	6.9
TEN MILE MIDDLE	6800	2/26	40	11.8	11.6	10.4
TEN MILE UPPER	8000	2/26	42	12.3	15.2	12.7
TEPEE CREEK	8000	2/24	52	14.9	14.6	14.3
TEPEE CREEK PILLOW	8000	2/24	SP	11.7	12.3	-
THUMB DIVIDE (WY)	7900	2/26	51	13.9	20.3	19.0
TYMBRIE CREEK	8850	2/28	48	14.3	9.7	12.6
TRAIL CREEK	7090	2/23	32	8.6	7.2	7.1
TV MOUNTAIN	6800	3/01	57	18.3	20.6	17.0
TWELVEMILE CREEK	5600	2/28	72	25.2	29.0	18.8
TWELVEMILE CREEK PILLOW	5600	2/28	SP	19.3	24.2	16.4
TWENTY-ONE MILE	7150	3/01	51	15.2	18.6	16.1
TWIN LAKES	6510	2/28	117	40.2	48.0	37.2
TWIN LAKES PILLOW	6400	2/28	SP	40.0	50.0	37.7
VALLEY VIEW (ID)	6500	2/27	47	12.8	14.1	15.4
WALDRON	5600	3/03	31	9.2	12.2	11.2
WALDRON PILLOW	5600	3/03	SP	9.1	12.8	11.9
WEASEL DIVIDE	5450	2/24	98	33.0	43.5	32.6
WEST YELLOWSTONE	6700	3/01	34	9.6	12.8	10.6
WEST YELLOWSTONE PILLOW	6700	2/25	SP	6.7	8.9	7.7
WHISKEY CREEK	6800	2/26	57	17.3	22.7	18.5
WHISKEY CREEK PILLOW	6800	2/26	SP	13.7	17.7	-
WHITE ELEPHANT (ID)	7700	2/27	65	19.7	28.6	-
WHITE MILL	8700	3/01	72	22.2	27.8	24.1
WHITE MILL PILLOW	8700	3/01	SP	20.6	24.8	-
WHITE PINE RIDGE	8850	2/23	21	4.2	4.9	4.7
WILLOW CREEK	6500	2/27	31	8.2	5.0	-
WOLVERINE (WY)	7650	2/28	46	11.9	10.4	-
WRONG CREEK	5700	2/26	43	12.2	15.4	14.6
WRONG RIDGE	6800	2/27	53	16.2	21.5	19.3



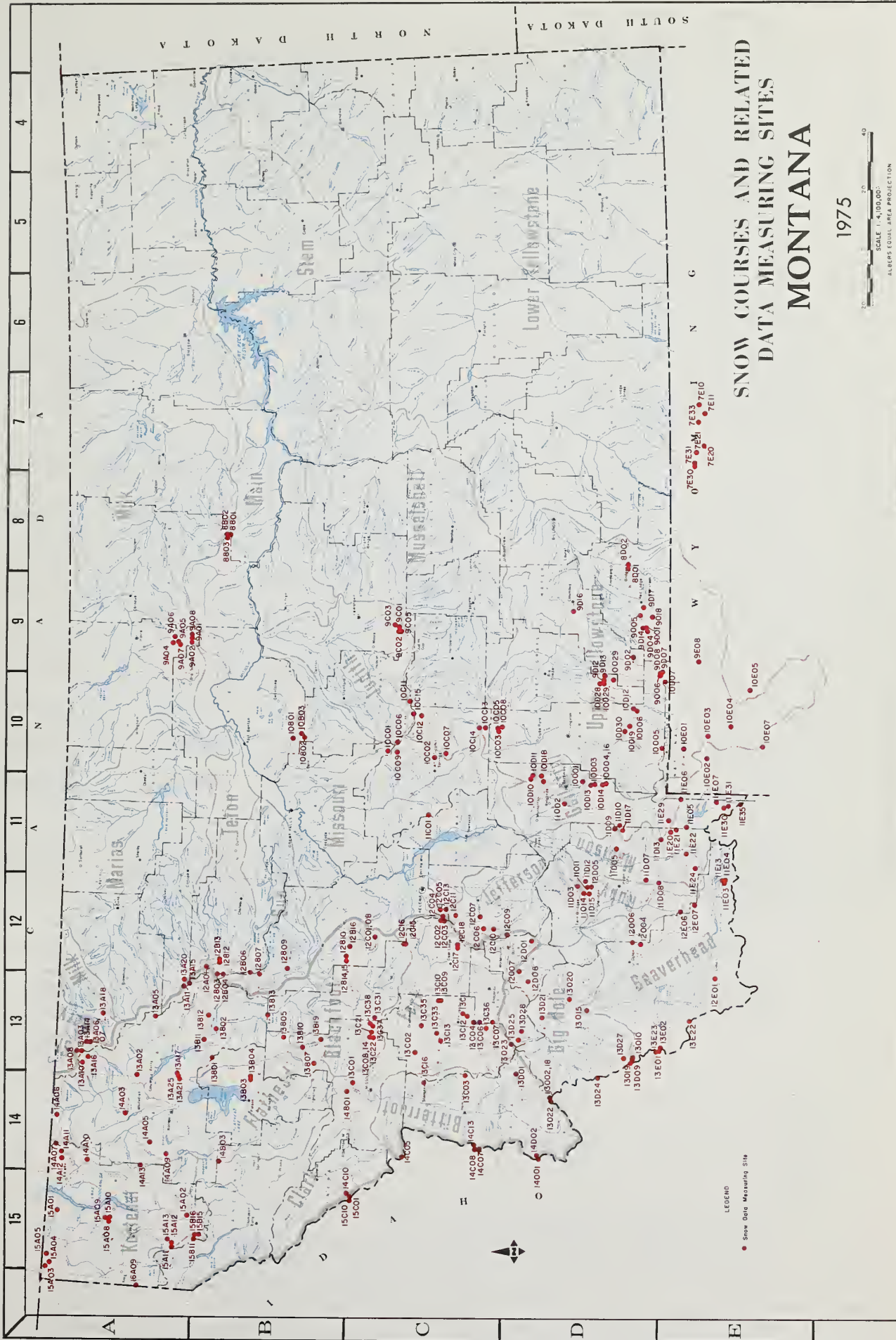
SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

LATE ARRIVING DATA

AMBROSE	6480	2/25	43	11.4	14.2	11.7
BIG SNOWY	7150	3/03	59	20.1	18.8	15.0
CARTER CREEK	7400	3/02	18	4.0	4.8	4.4
CRYSTAL LAKE	6100	3/03	44	13.1	12.4	12.3
DIX HILL	6400	3/01	32	9.2	9.0	-
HEART LAKE TRAIL	4800	2/26	74	24.9	28.6	21.2
HOODOO BASIN	6000	2/26	126	46.9	63.4	46.1
HOODOO BASIN PILLOW	6000	2/24	SP	42.6	-	45.8
HOODOO CREEK	5900	2/26	122	43.5	58.6	43.2
NORTH FORK ELK CREEK	6250	3/05	42	14.3	12.0	10.5
NORTH FORK ELK CREEK PILLOW	6250	3/05	SP	13.3	11.5	10.9
OPHIR PARK	7150	3/01	50	16.0	16.8	-
PETERSON MEADOWS PILLOW	7200	2/27	SP	9.1	8.6	-
PICKET PIN LOWER	6200	3/03	13	4.2	.0	-
PICKET PIN MIDDLE	7250	3/02	50	18.9	7.0	-
PICKET PIN UPPER	8100	3/02	57	20.2	15.7	-
ROCK CREEK	5600	3/03	31	10.0	6.9	8.3





SNOW COURSES AND RELATED DATA MEASURING SITES MONTANA

1975



MISSOURI RIVER BASIN

BEAVERHEAD RIVER	bloody Dick	7600	12	85	16w		3,4,5	1
	Center Creek	7600	22	85	7w		2,3,4,5	
	Dead Creek	7600	24	135	7w	P,HSC	3,4,5	1
	Dead Creek Lake	7600	24	135	13w		3,4,5	1
	Elk Horn Springs	7600	21	45	12w		3,4,5	3
	Elk Horn Springs	7600	21	45	12w		3,4,5	3
	Leavenworth	7600	23	165	2w	H,HSC	10	10
	Leavenworth	7600	23	165	2w	H,HSC	10	10
	Laurel Canyon	6930	26	165	2w		1,2,3,4,5	10
	Laurel Canyon	6930	26	165	2w		1,2,3,4,5	10
	Laurel Canyon	6930	26	165	2w		1,2,3,4,5	10
	Laurel Canyon	6930	26	165	2w		1,2,3,4,5	10
RUBY RIVER	Laurel Canyon	1360	4	105	15w	P	3,4	1
	Laurel Canyon	1360	4	105	15w		3,4	1
	Laurel Canyon	1360	4	105	15w		3,4	1
	Laurel Canyon	1360	4	105	15w		3,4	1
	Laurel Canyon	1360	4	105	15w		3,4	1
	Laurel Canyon	1360	4	105	15w		3,4	1
	Laurel Canyon	1360	4	105	15w		3,4	1
	Laurel Canyon	1360	4	105	15w		3,4	1
	Laurel Canyon	1360	4	105	15w		3,4	1
	Laurel Canyon	1360	4	105	15w		3,4	1
	Laurel Canyon	1360	4	105	15w		3,4	1
	Laurel Canyon	1360	4	105	15w		3,4	1
BIG HOLE RIVER	Abundance Lake	8800	7	35	11w		3,4,5	1
	Abundance Lake	8800	7	35	11w		3,4,5	1
	Abundance Lake	8800	7	35	11w		3,4,5	1
	Abundance Lake	8800	7	35	11w		3,4,5	1
	Abundance Lake	8800	7	35	11w		3,4,5	1
	Abundance Lake	8800	7	35	11w		3,4,5	1
	Abundance Lake	8800	7	35	11w		3,4,5	1
	Abundance Lake	8800	7	35	11w		3,4,5	1
	Abundance Lake	8800	7	35	11w		3,4,5	1
	Abundance Lake	8800	7	35	11w		3,4,5	1
	Abundance Lake	8800	7	35	11w		3,4,5	1
	Abundance Lake	8800	7	35	11w		3,4,5	1
JEFFERSON RIVER	Berry Meadow	7900	8	5w	5w		3,4	1
	Berry Meadow	7900	8	5w	5w		3,4	1
	Berry Meadow	7900	8	5w	5w		3,4	1
	Berry Meadow	7900	8	5w	5w		3,4	1
	Berry Meadow	7900	8	5w	5w		3,4	1
	Berry Meadow	7900	8	5w	5w		3,4	1
	Berry Meadow	7900	8	5w	5w		3,4	1
	Berry Meadow	7900	8	5w	5w		3,4	1
	Berry Meadow	7900	8	5w	5w		3,4	1
	Berry Meadow	7900	8	5w	5w		3,4	1
	Berry Meadow	7900	8	5w	5w		3,4	1
	Berry Meadow	7900	8	5w	5w		3,4	1
MADISON RIVER	Black Bear	7900	27	155	5E	S,P	1,2,3,4,5,5h,6	1,2
	Black Bear	7900	27	155	5E	S,P	1,2,3,4,5,5h,6	1,2
	Black Bear	7900	27	155	5E	S,P	1,2,3,4,5,5h,6	1,2
	Black Bear	7900	27	155	5E	S,P	1,2,3,4,5,5h,6	1,2
	Black Bear	7900	27	155	5E	S,P	1,2,3,4,5,5h,6	1,2
	Black Bear	7900	27	155	5E	S,P	1,2,3,4,5,5h,6	1,2
	Black Bear	7900	27	155	5E	S,P	1,2,3,4,5,5h,6	1,2
	Black Bear	7900	27	155	5E	S,P	1,2,3,4,5,5h,6	1,2
	Black Bear	7900	27	155	5E	S,P	1,2,3,4,5,5h,6	1,2
	Black Bear	7900	27	155	5E	S,P	1,2,3,4,5,5h,6	1,2
	Black Bear	7900	27	155	5E	S,P	1,2,3,4,5,5h,6	1,2
	Black Bear	7900	27	155	5E	S,P	1,2,3,4,5,5h,6	1,2
GALLATIN RIVER	Arch Falls	7150	3	45	6E		1,2,3,4,5,5h,6	1
	Arch Falls	7150	3	45	6E		1,2,3,4,5,5h,6	1
	Arch Falls	7150	3	45	6E		1,2,3,4,5,5h,6	1
	Arch Falls	7150	3	45	6E		1,2,3,4,5,5h,6	1
	Arch Falls	7150	3	45	6E		1,2,3,4,5,5h,6	1
	Arch Falls	7150	3	45	6E		1,2,3,4,5,5h,6	1
	Arch Falls	7150	3	45	6E		1,2,3,4,5,5h,6	1
	Arch Falls	7150	3	45	6E		1,2,3,4,5,5h,6	1
	Arch Falls	7150	3	45	6E		1,2,3,4,5,5h,6	1
	Arch Falls	7150	3	45	6E		1,2,3,4,5,5h,6	1
	Arch Falls	7150	3	45	6E		1,2,3,4,5,5h,6	1
	Arch Falls	7150	3	45	6E		1,2,3,4,5,5h,6	1
MISSOURI RIVER MAIN STEM	Big Goose	7900	10	19w	9E		1,2,3,4,5	1,12
	Big Goose	7900	10	19w	9E		1,2,3,4,5	1,12
	Big Goose	7900	10	19w	9E		1,2,3,4,5	1,12
	Big Goose	7900	10	19w	9E		1,2,3,4,5	1,12
	Big Goose	7900	10	19w	9E		1,2,3,4,5	1,12
	Big Goose	7900	10	19w	9E		1,2,3,4,5	1,12
	Big Goose	7900	10	19w	9E		1,2,3,4,5	1,12
	Big Goose	7900	10	19w	9E		1,2,3,4,5	1,12
	Big Goose	7900	10	19w	9E		1,2,3,4,5	1,12
	Big Goose	7900	10	19w	9E		1,2,3,4,5	1,12
	Big Goose	7900	10	19w	9E		1,2,3,4,5	1,12
	Big Goose	7900	10	19w	9E		1,2,3,4,5	1,12

Year	Percentage	Number
1990	9%	19
1991	10%	71
1992	10%	53

	10002	7000	19	98	P	1
Greatloop	10002	7000	19	98	97	1
Highwood Divide	10002	5650	16	98	97	1
Highwood	10001	7500	34	138	1,2,3,4,5	1,1,2
Kings Hill	10001	7500	34	138	1,2,3,4,5	1,1,2
Simple Pass	12001	6000	16	138	1,2,3,4,5	3,4,5
Simple Pass	12001	6000	16	138	7M	M
Tan Rile Lower	12002	6000	12	98	6W	3
Tan Rile Lower	12002	6000	12	98	6W	3
Tan Rile Upper	12003	6000	12	98	6W	3
Upper	12004	8000	19	98	1,2,3,4,5	1
Upper	12004	8000	19	98	1,2,3,4,5	1

2/ Blank refers to snow cover only at site
S = snow pillow also
P = precipitation stage also
M = soil moisture stage also
T = max-min temperature also
W = wind run also
A = aerial marker also
NSC = no snow cover at site
3/ Numbers 1,2,3,4,5,5b,6 refer to snow cover
Number 1 was 1, 2a, 3a, 4a, and 5a, 5b, 6a
4/ Precipitation stage and soil moisture are
5/ Numbers refer to agency below the snow

NSC = no snow course at site

2/ Numerals 1,2,3,4,5,6,7 refer to snow course or aerial marker measurements on January 1, February 1, March 1, April 1, May 1, June 15, and June 1. *Not snow pillows, temperature, and wind run are daily readings, most precipitation is not recorded.

2/ Numerals refer to agency making the snow survey as follows:

1. Soil Conservation Service
2. Forest Service
3. Technical Service
4. National Park Service
5. Bureau of Indian Affairs
6. National Park Service
7. National Association of Forest Rangers
8. National Association of Game Warden
9. Department of Game and Wildlife
10. Department of Game and Wildlife
11. Private Contractor
12. National Association of Game Warden

Agencies and Organizations Cooperating in Montana Snow Surveys

GOVERNMENT AGENCIES

Canada:

Water Survey of Canada, Calgary, Department of the
Environment

Water Resources Service, Department of Lands, Forests
and Water Resources, British Columbia

Federal:

Department of the Army
Corps of Engineers

U.S. Department of Agriculture
Forest Service

Soil Conservation Service

U.S. Department of Commerce
NOAA, National Weather Service

U.S. Department of the Interior
Bonneville Power Administration

Bureau of Indian Affairs

Bureau of Reclamation

Fish and Wildlife Service

Geological Survey

National Park Service

STATE

Montana Association of Conservation Districts

Montana Department of Fish and Game

Montana Department of Natural Resources and
Conservation

Montana State University - Agricultural Experiment
Station

North Montana Branch Station - Agricultural Exper-
iment Station

University of Montana - School of Forestry

PRIVATE

Montana Power Company

Other organizations and individuals furnish valuable
information for snow survey reports. Their cooperation
is gratefully acknowledged.

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with the Snow Survey"*

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